

**MINIMUM PROCESSOR INSTRUCTION FOR IMPLEMENTING WEIGHTED FAIR  
QUEUEING AND OTHER PRIORITY QUEUEING**

**ABSTRACT OF THE DISCLOSURE**

The present invention provides techniques for efficiently determining a minimum or maximum of a plurality of values and the index of the minimum using registers of a processor. The present invention also provides for various processor instructions for determining the  
5 minimum /maximum and index of two or more values. The present invention finds particular benefit in implementing heaps and in systems utilizing Weighted Fair Queueing (WFQ).